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Oral Sex: Varied Behaviors and Perceptions in a College Population

Wendy C. Chambers
University of Georgia

Views and behaviors pertaining to oral sex have changed in recent years. This anonymous, online survey posed both old and new questions pertaining to oral sex among a college population. This study not only confirmed previous findings about virgins engaging in oral sex but also found that women reported giving oral sex more often than receiving it from men. Oral sex was not only perceived as less intimate than intercourse but also more likely to be perceived as less intimate by women than men. Participants most frequently endorsed a committed relationship, but not a married relationship, for comfort in engaging in oral sex. Last, college students were more knowledgeable of the sexually transmitted infection risks of oral sex than how to actually protect themselves during oral sex. Additional analyses by gender and virginity were also performed to further understand the nuances amongst virgins and women and men.

Historically, fellatio or cunnilingus, hereto referred to as oral sex, were perceived among heterosexual couples as not only more intimate than intercourse but also to be reserved for those who were married (Michael, Gagnon, Laumann, & Kolata, 1994). It took Kinsey’s studies to reveal the greater prevalence of oral sex; though it was not until the 1970s that societal attitudes began to perceive it as acceptable for unmarried couples as well (Michael et al., 1994).

Thus it is a historical reversal that oral sex has become more common than intercourse among heterosexual, White, and better educated samples as well as a precursor to intercourse (Billy & Tanfer, 1993; Michael et al., 1994; Prinstein, Meade, & Cohen, 2003; Schwartz, 1999). In addition, oral sex and other noncoital activities have made the definition of “sex” variable. One study indicated that roughly 60% of an undergraduate sample (N = 599) did not regard oral sex as “sex” (Sanders & Reinisch, 1999), though a younger sample (ages 13–16) indicated that as much as 77% of a national sample endorsed oral sex as “sex” (NBC News/People, 2005). Other studies have indicated that a range of 10–30% of virgin samples (defined as having not engaged in intercourse) had engaged in oral sex or perceived oral sex as allowing one to maintain virginity (Herold & Way, 1983; Schuster, Bell, & Kanouse, 1996; Woody, Russell, D’Souza, & Woody, 2000; see studies summarized in Brückner & Bearman, 2005; NBC News/People Magazine, 2005; Remez, 2000; Sanders & Reinisch, 1999).

The major viral and bacterial sexually transmitted infections (STIs) can also be transmitted via oral sex—these include human papillomavirus (HPV), herpes simplex virus, hepatitis B, gonorrhea, syphilis, Chlamydia, and chancroid, respectively (Edwards & Carne, 1998a, 1998b; Hawkins, 2001). The Centers for Disease Control (CDC; 2004a, 2004b, 2004c, 2004d) also validates transmission via oral sex for Chlamydia, herpes, gonorrhea, and syphilis. In addition, whereas herpes simplex virus type 2 has historically been found to infect the genital region, herpes simplex virus type 1, most commonly found in the region of the mouth, is now appearing in the genital region, with oral sex identified as the significant culprit (Cherpes, Meyn, & Hiller, 2005). Finally, Remez (2000) cited communication with Penelope Hitchcock, chief of the Sexually Transmitted Diseases Branch of the National Institute of Allergy and Infectious Diseases, who stated that HIV transmission was possible via oral sex, but that it is rare. Barrier methods, such as the male condom, dental dams, and plastic food wrap such as Saran™ wrap have been endorsed as protection during oral sex, though typically any type of sexual contact is strongly discouraged if any type of lesion or sore is evident (CDC, 2000; Palo Alto Medical Foundation, 2005; University Health Center, 2005).

Yet, despite the likelihood of STI-transmission via oral sex, the national survey of teens by NBC News/People Magazine (2005) found that only 30% used protection (such as a condom) all of the time. Forty-two percent never used any protection. Nonetheless, this is in great contrast to a previous study of youth aged 12–15 in which very few participants used any protection, though the samples were extremely small (Boekeloo & Howard, 2002).

In terms of incidence and frequency, earlier studies indicated a rise in oral sex among adolescents (Newcomer & Udry, 1985), university students (Woody et al., 2000; Grunseit, Richters, Crawford, Song, & Kippax, 2005), and adults in general (Laumann, Gagnon, Michael, & Michaels, 1994). Other research has indicated greater acceptability of oral sex among adolescents in comparison to intercourse (Halpern-Felsher, Cornell, Kropp, & Tschanz, 2005). In the NBC News/People Magazine (2005) study, 12% of the teen respondents indicated that they had engaged in oral sex.

Regarding gender differences in frequency of oral sex behavior, studies from the 1980s and the early 1990s revealed no significant differences in the giving/receiving of oral sex...
between men and women overall (Michael et al., 1994), greater activity for cunnilingus (Haas, 1979, as cited in Newcomer & Udry, 1985; Newcomer & Udry, 1985; Schwartz, 1999), or greater activity for fellatio in the past month (Herold & Way, 1983). Are there currently gender differences in giving/receiving oral sex? Although the evidence is meager or anecdotal (McKay, 2004), it does indicate a potential trend of women giving oral sex more frequently to men as opposed to an equal interchange (Remez, 2000). The reasons for any of these trends, however, are purely speculative.

Few studies have addressed the motivations for engaging in oral sex, though others have addressed predicting oral sex behavior (Herold & Way, 1983). The NBC News/People Magazine (2005) study found that between 40–47% of their young sample felt that not needing to worry about pregnancy, meeting the right person, and the desire of the partner to engage in oral sex were major reasons for engaging in oral sex the first time. Anecdotal evidence, based on speaking with a number of high school classes (Barrett, 2004), has included motivations of curiosity, pleasure, pleasing one’s partner, intimacy, pregnancy/intercourse avoidance, drunkenness, and as a means to reduce STI/HIV risk.

Studies of oral sex also have not consistently addressed the varying relationship contexts in which oral sex occurs. Herold and Way (1983) did partially address the relationship context. Their study of unmarried university women revealed high dating commitment as positively correlated with high frequencies of performing oral sex, indicating that oral sex was more likely to take place in serious relationships than in less serious ones. A decade later, a community survey of over 3,000 men also found that oral sex was also more likely to occur in more serious relationships (Billy & Tanfer, 1993). These findings, however, might be outdated and also did not elucidate the various types of relationships that can be perceived as serious.

In summary, oral sex is now perceived not only more casually than intercourse but also as something in which one can engage prior to intercourse, with greater frequency, and still potentially remain a virgin. The level of knowledge about STI transmission via oral sex and the varied methods of protection have not been thoroughly investigated. The motivations for oral sex are possibly varied. The earlier literature did not indicate any clear trends regarding gender differences in giving/receiving oral sex, though oral sex seems to have increased in frequency over the years among adults and adolescents. Past research has also indicated that oral sex is more likely to take place in serious relationships, but the types of relationships have not been specified.

Therefore, what questions as yet remain unanswered or unclear? First, it remains unclear how well the oral-sex STI risk is understood and, more importantly, how effectively people can protect themselves. In addition, the evidence is scarce on how often or how many virgins tend to engage in oral sex. The motivations for engaging in oral sex and any gender differences therein also need to be clarified. Finally, the specific types of relationships that today’s young adults consider acceptable for oral sex are as yet unknown. In addition, it is unknown whether greater prevalence of oral sex implies that it is perceived as less intimate than intercourse.

Pursuing answers to these questions should yield important information regarding the health risk of oral sex, the potentially varying motivations between the genders for giving/receiving oral sex, the type of relationships in which oral sex is likely to occur, and the frequency of oral sex in comparison to intercourse. All of these findings have implications for sex education classes, the Department of Health, the CDC, and other avenues (i.e., parents, media) that both assess and influence the sexual health of young men and women. People of all ages should be aware of their motivations for their sexual behavior (which could potentially lead to modifying unsafe behavior), the potential health implications, and how to protect their health when engaging in various sexual behaviors.

The current study addressed the following in a college-aged audience in the format of an anonymous, online survey: incidence of oral sex among virgins versus nonvirgins; the level of intimacy that is accorded oral sex; the type of relationship in which oral sex is typically given/received; overall frequency of giving versus receiving of oral sex between men and women; the most typical reason(s) for giving versus receiving oral sex—that is, for each particular respondent, not a general opinion of what most “think” is the typical reason; assessment of knowledge about transmission of STIs via oral sex; and whether and how often protection is used during oral sex.

**Methods**

**Procedure**

Between June and December of 2004, a sample of 2,147 college students at the University of Georgia aged 18 years or older completed an online survey about oral sex to achieve research participation credit. Only students in introductory psychology courses were invited to take the survey. Participants initially viewed an informed consent page that explained that intimate questions pertaining to oral sex would be the focus of the survey. They were informed that they would not be penalized for choosing not to take the survey or not finishing it, but they had to finish it to receive credit. Student consent was accounted for by their choice to proceed with the survey.

Once students completed the survey, they would click on an electronic button to submit their answers, which would also produce a pop-up page with feedback about their performance on the knowledge section of the survey. This page also contained a debriefing: “Please read the debriefing section below and then BE SURE TO CLICK ON THE “Click here to receive Research Participation Credit” button THAT FOLLOWS OR YOU WILL NOT RECEIVE CREDIT FOR YOUR PARTICIPATION. Although the answers to the survey were anonymous, students submitted their names to a separate database to receive credit after completing the survey. Every other week the researcher would download the
name database and award students credit online through the university’s online system. Thus, the data and the names were kept completely separate.

Measures

A survey was constructed to assess the nature, knowledge, and gender differences in oral sex behavior (see the Appendix). No identifying information was collected, only demographics. The variables were organized in the following domains:

Demographics. Participants provided information about their gender, race, sexual orientation, and age.

General sexual behavior/attitudes. General behavioral questions were asked regarding whether the participants had had intercourse before, whether the participants considered themselves virgins, and the number of intercourse partners in the past year and lifetime. Intercourse was defined as penetration by a sexual organ—the data indicate that participants correctly understood this definition to mean penetration of or by a sexual organ—see the Discussion section for complete explanation.

Oral sex. Survey items measured the intimacy of oral sex and intercourse on 5-point Likert-type scales (1 = not at all intimate and 5 = extremely intimate). Participants were asked how often they protected themselves while giving or receiving oral sex and what type of protection they used. They were given choices to select (“Check all that apply”) as well as a text box and always had the option to choose that they did not engage in oral sex. “Check all that apply” was also offered for the type of relationship in which participants felt comfortable giving and receiving oral sex and the most typical reason for giving/receiving oral sex. The perception of whether oral sex was given more, received more, or exchanged equally was also assessed as well as when the participants last gave oral sex. See the Appendix for further details.

Knowledge. The survey also measured how much the participants knew about the STI risk of oral sex. Finally, participants were given a list of answers from which they were asked to choose that could protect them from receiving an STI while engaging in oral sex. See the Appendix for further details.

Analyses

Frequencies, cross-tabs, and Pearson chi-square were used. Unless otherwise noted, Pearson chi-square should be assumed for significant differences between groups. The following topics were analyzed: incidence of oral sex among virgins versus nonvirgins, the level of intimacy that is accorded oral sex, the type of relationship in which oral sex is typically given/received, the overall frequency of giving versus receiving of oral sex between men and women, the most typical reason(s) for giving/receiving oral sex, the assessment of knowledge about transmission of STIs via oral sex, and whether and how often protection is used during oral sex. For the latter two topics, each item was assessed individually and had a specific right or wrong answer; the greater number correct indicated greater knowledge, though no composite score was created. Additional post hoc analyses were conducted between virgins and nonvirgins and between women and men to further investigate possible differences between these groups on the various oral sex topics.

Results

A total of 122 cases were deleted from the original sample because of inconsistent responding (i.e., answered that they did not engage in oral sex, but then gave reasons for engaging in it) or if the majority of data were missing beyond the first few answers. Some students also took the survey twice; duplicate surveys were thus deleted by comparing the date and time stamp for when the respondent took the survey and the time they entered their name to receive credit. Only their first survey responses were accepted. In the final analysis, 1,928 survey responses were analyzed.

Sample Demographics

Respondents were 61.9% female (n = 1,194) and 38.1% male (n = 734). More than 90.0% of the sample was under the age of 21 and heterosexual, and 86.0% were European American. Demographics closely matched those of the University of Georgia, the site of the sample, in terms of ethnicity (Allen, 2004). Less than 1% indicated that they were gay, lesbian, or bisexual. The mean age of each participant was 19.3 (see Table 1).

Sexual History

In terms of general sexual history, 62.0% (n = 1,197) of the sample indicated that they had had intercourse, and yet 38.8% (n = 748) indicated that they identified themselves as virgins. Clearly, most but not all participants were defining virginity according to penetrative intercourse. Thus, although 727 participants indicated that they had not had intercourse, 748 indicated that they identified themselves as virgins, which indicates that 21 people who had engaged in intercourse still considered themselves virgins (see Table 2a for further details).

The sexual history of the participants is naturally limited because of their age and potentially other factors (i.e., their college status as opposed to those who do not pursue college). Those who reported having had two or fewer partners over the past year accounted for nearly 86.0% of the sample. Approximately 70.0% of the total sample had two or fewer partners in their entire lifetime, with 37.6% (n = 724) indicating that they had not had any partners (see Table 2b). Similar albeit some statistically different percentages for men and
women were reported for number of partners in the participants’ past year, \( \chi^2(4, N = 1,928) = 14.463, p = .006 \), and lifetime, \( \chi^2(4, N = 1,928) = 13.142, p = .011 \) (Table 2c). Overall, the differences were not large; the majority of men and women had one or no partner in the past year or lifetime.

### Oral Sex

#### People who identify as virgins and whether they have engaged in oral sex.

For the purpose of analysis, virgins were selected as those who had not had sexual intercourse (37.7%, \( n = 727 \)). A total of 1197 (62.1%) indicated that they had had intercourse and are referred to as nonvirgins. Regarding giving or receiving oral sex, most virgins indicated that they did not engage in oral sex. A significant minority, however, had engaged in oral sex. Out of 717 virgins who responded to this question, a total of 280 (39.1%) indicated that they had given oral sex to someone in their lifetime, in comparison to 1,134 (95.5%) nonvirgins, out of 1,188 respondents. Out of 712 virgins who responded to this question, 297 (41.7%) indicated that they had received oral sex from someone in their lifetime, whereas out of 1,180 nonvirgin respondents, a total of 1,137 (96.4%) indicated that they had received oral sex from someone in their lifetime (see Table 3a and 3b for details). Thus, although fewer than half of the virgins had engaged in oral sex, almost everyone who had had intercourse had also engaged in oral sex.

#### The level of intimacy that is accorded oral sex.

Participants indicated their perception of intimacy on a 1–5 scale (1 = not intimate at all and 5 = extremely intimate). The 1–5 Likert-type scale used to assess the intimacy of oral sex and intercourse was condensed into not intimate (rating of 1 or 2), neither intimate nor lacking in intimacy (rating of 3), and intimate (rating of 4 or 5). The majority of participants, 53.5% (\( n = 1032 \)), perceived oral sex as intimate. Much more unanimity existed in perceiving inter-
course as intimate than in perceiving oral sex as intimate (see Table 4 for details).

The type of relationship in which oral sex is typically given/received. Approximately 12.0% \( (n = 237) \) indicated that they had not engaged in oral sex. When it came to the type of relationship in which participants felt comfortable giving oral sex, the majority endorsed the “committed” relationship (61.3%, \( n = 1,182 \)). “Engaged/Married” and “It depends” were endorsed by similar percentages: 30.4% \( (n = 586) \) and 27.4% \( (n = 529) \), respectively. Likewise, similar percentages endorsed the “Noncommitted” relationship (12.0%, \( n = 232 \)) and the “Primarily sexually based” relationship (12.7%, \( n = 244 \)). Highly similar percentages were given for the comfortability in giving and receiving oral sex in Committed, Engaged/Married, and It depends categories (no statistical comparisons were made between giving/receiving categories for the total sample). Most participants felt comfortable engaging in oral sex in more serious relationships, though the lower endorsement of marriage possibly indicates less comfort in engaging in oral sex in a legally sanctioned committed relationship or an indication of lack of experience in that relationship type (see Discussion). Furthermore, the small percentage of participants that were willing to engage in oral sex in less serious relationships were more likely to do so if they were receiving oral sex rather than giving (see Table 5 for details).

Table 3a. Description of Oral Sex Behavior for Virgins/No Intercourse

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virgins/No Intercourse: Given oral sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never engaged in oral sex</td>
<td>437</td>
<td>60.9</td>
</tr>
<tr>
<td>Given oral sex to someone in lifetime</td>
<td>280</td>
<td>39.1</td>
</tr>
<tr>
<td>Given oral sex to 1 oral sex partner in lifetime</td>
<td>139</td>
<td>19.4</td>
</tr>
<tr>
<td>Given oral sex to 1, 2, or 3 oral sex partners in lifetime</td>
<td>229</td>
<td>32.0</td>
</tr>
<tr>
<td>Given oral sex to 3 oral sex partners in lifetime</td>
<td>33</td>
<td>4.6</td>
</tr>
<tr>
<td>Given oral sex to more than 3 oral sex partners lifetime</td>
<td>51</td>
<td>7.1</td>
</tr>
<tr>
<td>Virgins/No Intercourse: Received oral sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never engaged in oral sex</td>
<td>415</td>
<td>58.3</td>
</tr>
<tr>
<td>Received oral sex from someone in lifetime</td>
<td>297</td>
<td>41.7</td>
</tr>
<tr>
<td>Received oral sex from 1 oral sex partner in lifetime</td>
<td>147</td>
<td>20.6</td>
</tr>
<tr>
<td>Received oral sex from 1, 2, or 3 oral sex partners in lifetime</td>
<td>239</td>
<td>33.6</td>
</tr>
<tr>
<td>Received oral sex from 3 oral sex partners in lifetime</td>
<td>37</td>
<td>5.2</td>
</tr>
<tr>
<td>Received oral sex from more than 3 oral sex partners in lifetime</td>
<td>58</td>
<td>8.1</td>
</tr>
</tbody>
</table>

Table 3b. Description of Oral Sex Behavior for Nonvirgins/Intercourse

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonvirgins/Intercourse: Given oral sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never engaged in oral sex</td>
<td>54</td>
<td>4.5</td>
</tr>
<tr>
<td>Given oral sex to someone in lifetime</td>
<td>1134</td>
<td>95.5</td>
</tr>
<tr>
<td>Given oral sex to 1 oral sex partner in lifetime</td>
<td>317</td>
<td>26.7</td>
</tr>
<tr>
<td>Given oral sex to 1, 2, or 3 oral sex partners in lifetime</td>
<td>708</td>
<td>59.6</td>
</tr>
<tr>
<td>Given oral sex to 3 oral sex partners in lifetime</td>
<td>185</td>
<td>15.6</td>
</tr>
<tr>
<td>Given oral sex to more than 3 oral sex partners lifetime</td>
<td>426</td>
<td>35.9</td>
</tr>
<tr>
<td>Nonvirgins/Intercourse: Received oral sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never engaged in oral sex</td>
<td>43</td>
<td>3.6</td>
</tr>
<tr>
<td>Received oral sex from someone in lifetime</td>
<td>1137</td>
<td>96.4</td>
</tr>
<tr>
<td>Received oral sex from 1 oral sex partner in lifetime</td>
<td>280</td>
<td>23.7</td>
</tr>
<tr>
<td>Received oral sex from 1, 2, or 3 oral sex partners in lifetime</td>
<td>675</td>
<td>57.2</td>
</tr>
<tr>
<td>Received oral sex from 3 oral sex partners in lifetime</td>
<td>198</td>
<td>16.8</td>
</tr>
<tr>
<td>Received oral sex from more than 3 oral sex partners in lifetime</td>
<td>462</td>
<td>39.2</td>
</tr>
</tbody>
</table>

Table 4. Description of Total Sample: Intimacy of Oral Sex Versus Intercourse

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sample</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral Sex: Perceived Intimacy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intimate</td>
<td>1032</td>
<td>53.5</td>
</tr>
<tr>
<td>Neutral</td>
<td>517</td>
<td>26.8</td>
</tr>
<tr>
<td>Not intimate</td>
<td>378</td>
<td>19.6</td>
</tr>
<tr>
<td>Total</td>
<td>1927</td>
<td>100</td>
</tr>
<tr>
<td>Intercourse: Perceived Intimacy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intimate</td>
<td>1754</td>
<td>91.0</td>
</tr>
<tr>
<td>Neutral or Not Intimate</td>
<td>173</td>
<td>9.0</td>
</tr>
<tr>
<td>Total</td>
<td>1927</td>
<td>100</td>
</tr>
</tbody>
</table>
Overall frequency of giving/receiving oral sex between men and women. A significant sex difference emerged in the perception of the frequency of giving and receiving oral sex. Although fairly equal numbers of women perceived themselves as giving or receiving more or giving and receiving equally, significantly more men perceived themselves as receiving more and significantly fewer men indicate giving more. Thus, the difference emerged for giving and receiving with more women indicating that they give more and more men indicating that they receive more, $\chi^2(3, N=1874) = 84.690, p = .000$ (Table 6).

The most typical reasons for giving/receiving oral sex according to the participants’ oral sex experiences. Pleasure for the receiver was the most popular reason for giving oral sex, 78.4% ($n = 1,511$), as well as receiving oral sex, (78.3%, $n = 1,509$; see Table 7 for details). Less than 4.0% ($n = 67$) typed in other answers for most typical reasons for giving oral sex, most of which were clustered into the following categories: to foster or celebrate intimacy, mutual pleasure, feeling of obligation, foreplay, desire for reciprocity, and increasing chance of intercourse. The greatest endorsements were for mutual pleasure ($n = 20$) and reciprocity ($n = 14$). Close to 1.0% chose to type in their own answer for most typical reason for receiving oral sex, which fit under the categories of obligation, mutual pleasure, and intimacy, with fairly equal dispersion, though the most ($n = 9$) endorsed mutual pleasure.

Assessment of knowledge about transmission of STIs via oral sex. Pertaining to the health risks of oral sex, certain items revealed some uncertainty of knowledge in the participants. The participants were most confident in their knowledge of herpes—nearly 93.0% ($n = 1,791$) correctly answered yes, that they could get herpes from oral sex. The majority chose the correct answers to all of the items, but a significant minority (over 20.0%) was unaware of the health risks of oral sex (see Table 8 for details).

Knowledge of protection and how often protection is used during oral sex. How often participants protected themselves during oral sex could not be analyzed because of a misunderstanding of the question. On the basis of their reporting of what type of protection was used, it was abundantly clear that they interpreted the question to pertain to intercourse and not to oral sex. This could be due to the fact that the previous question pertained to the intimacy of intercourse. The correct answers for the item regarding protection during oral sex were male condom, Saran™ wrap, and dental dam. Although the female condom could be cut open to more thoroughly cover the vagina and thus adequately protect oneself during oral sex, its original form incompletely protects the outside of the vagina. Furthermore, if the female condom were not cut, the large size of the female condom would make this unwieldy and unlikely to be used during oral sex, where stimulation is most easily perceived through material that would not fall loosely over the genital area, as the female condom would. Thus, the positive endorsement of this contraceptive device as proper for oral sex protection is questionable and thus was regarded as an incorrect answer.

Table 5. Description of Total Sample: Oral Sex Comfort in Type of Relationship

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sample</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Giving oral sex: Multiple-Choice Answer Permitted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never engaged in oral sex</td>
<td>237</td>
<td>12.0</td>
</tr>
<tr>
<td>Engaged/married</td>
<td>586</td>
<td>30.4</td>
</tr>
<tr>
<td>Committed relationship</td>
<td>1182</td>
<td>61.3</td>
</tr>
<tr>
<td>Noncommitted relationship</td>
<td>232</td>
<td>12.0</td>
</tr>
<tr>
<td>Primarily sexually-based relationship</td>
<td>244</td>
<td>12.7</td>
</tr>
<tr>
<td>Depends on situation</td>
<td>529</td>
<td>27.4</td>
</tr>
<tr>
<td>Receiving oral sex: Multiple-Choice Answer Permitted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never engaged in oral sex</td>
<td>237</td>
<td>12.0</td>
</tr>
<tr>
<td>Engaged/married</td>
<td>594</td>
<td>30.8</td>
</tr>
<tr>
<td>Committed relationship</td>
<td>1126</td>
<td>58.4</td>
</tr>
<tr>
<td>Noncommitted relationship</td>
<td>359</td>
<td>18.6</td>
</tr>
<tr>
<td>Primarily sexually-based relationship</td>
<td>347</td>
<td>18.0</td>
</tr>
<tr>
<td>Depends on situation</td>
<td>536</td>
<td>27.8</td>
</tr>
</tbody>
</table>

**Indicates a significant difference between women and men for giving/receiving, $p = .000$.**
Most correctly endorsed male condom (90.0%, n = 1,757), though significantly fewer correctly endorsed the other options (see Table 9 for details). Thus, even greater confusion exists for protecting oneself during oral sex than exists for the health risks themselves. Clearly there is much greater awareness of giving oral sex to men than to women.

Table 7. Most Typical Reasons for Giving/Receiving Oral Sex According to Participants’ Oral Sex Experiences

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Giving Oral Sex: Multiple-Choice Answer Permitted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pleasure for you, the giver</td>
<td>391</td>
<td>20.3</td>
</tr>
<tr>
<td>Pleasure for the receiver</td>
<td>1511</td>
<td>78.4</td>
</tr>
<tr>
<td>Power</td>
<td>134</td>
<td>7.0</td>
</tr>
<tr>
<td>To avoid sexual intercourse</td>
<td>267</td>
<td>13.8</td>
</tr>
<tr>
<td>To avoid other activities but not intercourse</td>
<td>39</td>
<td>2.0</td>
</tr>
<tr>
<td>Receiving Oral Sex: Multiple-Choice Answer Permitted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pleasure for you, the receiver</td>
<td>1509</td>
<td>78.3</td>
</tr>
<tr>
<td>Pleasure for the giver</td>
<td>454</td>
<td>23.5</td>
</tr>
<tr>
<td>Power</td>
<td>85</td>
<td>4.4</td>
</tr>
<tr>
<td>To avoid sexual intercourse</td>
<td>207</td>
<td>10.7</td>
</tr>
<tr>
<td>To avoid other activities but not intercourse</td>
<td>35</td>
<td>1.8</td>
</tr>
</tbody>
</table>

Table 8. Knowledge About Transmission of STIs via Oral Sex

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sample</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correctly answered “yes” to getting herpes via oral sex</td>
<td>1791</td>
<td>93.0</td>
</tr>
<tr>
<td>Incorrectly answered “yes” to getting AIDS via oral sex</td>
<td>983</td>
<td>52.7</td>
</tr>
<tr>
<td>Incorrectly answered “no” to getting hepatitis B via oral sex</td>
<td>287</td>
<td>15.0</td>
</tr>
<tr>
<td>Incorrectly answered “not impossible, but rare” to getting hepatitis B via oral sex</td>
<td>221</td>
<td>11.7</td>
</tr>
<tr>
<td>Incorrectly answered “no” to getting gonorrhea via oral sex</td>
<td>393</td>
<td>20.4</td>
</tr>
<tr>
<td>Incorrectly answered “not impossible, but rare” to getting gonorrhea via oral sex</td>
<td>183</td>
<td>9.5</td>
</tr>
<tr>
<td>Incorrectly answered “no” to getting Chlamydia via oral sex</td>
<td>407</td>
<td>21.1</td>
</tr>
<tr>
<td>Incorrectly answered “not impossible, but rare” to getting Chlamydia via oral sex</td>
<td>195</td>
<td>10.1</td>
</tr>
<tr>
<td>Incorrectly answered “no” to getting genital warts via oral sex</td>
<td>279</td>
<td>14.5</td>
</tr>
<tr>
<td>Incorrectly answered “not impossible, but rare” to getting genital warts via oral sex</td>
<td>151</td>
<td>7.8</td>
</tr>
</tbody>
</table>

Post Hoc Analyses

The level of intimacy that is accorded oral sex. Although the majority of both virgins (53.0%, n = 386) and nonvirgins (53.8%, n = 644) endorsed oral sex as intimate, slightly more virgins (22.2%, n = 161) than nonvirgins endorsed oral sex as not intimate (18.0%, n = 216), though this difference was not significant. In terms of rating the intimacy of intercourse, the disparity was even greater: 10.6% (n = 77) of the virgins regarded intercourse as not intimate in comparison to 1.0% (n = 12) of nonvirgins. Nearly 87.0% (n = 632) of the virgins compared with 93.6% (n = 1,120) of the nonvirgins rated intercourse as intimate. Thus, the majority of virgins and nonvirgins agreed that intercourse was intimate, in fact far more than agreed that oral sex was intimate. Significantly more virgins than nonvirgins, however, rated intercourse as not intimate, \( \chi^2(2, N = 1,924) = 101.242, p = .000 \). Overall, greater variety of opinion appears to exist among virgins in comparison to nonvirgins.

Women were less varied in their ratings of the intimacy of oral sex than men. Nearly 22.0% (n = 261) of women perceived oral sex as not intimate, 23.9% (n = 285) were neutral, and 54.2% (n = 647) regarded oral sex as intimate. For men, 15.9% (n = 117) perceived oral sex as not intimate, 31.6% (n = 232) were neutral, and 52.5% (n = 385) perceived oral sex as intimate. Thus, the majority of men and women as well as similar percentages therein thought of oral sex as intimate, men were significantly more inclined to be neutral whereas women were significantly more inclined to perceive oral sex as not intimate, \( \chi^2(2, N = 1,927) = 18.526, p = .000 \). In stark contrast, no significant differences emerged between the

Table 9. Knowledge of What Protects During Oral Sex

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sample</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple-Choice Answer Permitted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male Condom</td>
<td>1757</td>
<td>91.1</td>
</tr>
<tr>
<td>Saran™ Wrap</td>
<td>527</td>
<td>27.3</td>
</tr>
<tr>
<td>Spermicide</td>
<td>208</td>
<td>10.8</td>
</tr>
<tr>
<td>Patch</td>
<td>66</td>
<td>3.4</td>
</tr>
<tr>
<td>Dental Dam</td>
<td>624</td>
<td>32.4</td>
</tr>
<tr>
<td>Female Condom</td>
<td>786</td>
<td>40.8</td>
</tr>
<tr>
<td>Birth Control Pill</td>
<td>64</td>
<td>3.3</td>
</tr>
<tr>
<td>IUD</td>
<td>104</td>
<td>5.4</td>
</tr>
</tbody>
</table>

Note. Answers in bold are correct answers.
genders in their perceptions of intercourse. It was overwhelmingly endorsed as intimate.

The type of relationship in which oral sex is typically given/received. When asked what type of relationships they felt the most comfortable in giving oral sex, 33.1% of virgins (n = 241) indicated they were comfortable giving oral sex in an engaged/married relationship, whereas 28.7% (n = 344) of nonvirgins indicated the same. χ²(1, N = 1,924) = 4.160, p = .041. Nearly 44.0% (n = 316) of virgins and 72.0% (n = 862) of nonvirgins felt comfortable giving oral sex in a committed relationship. Thus, both virgins and nonvirgins felt more comfortable giving oral sex in a committed relationship than in a married relationship, though significantly more nonvirgins felt comfortable giving oral sex in a committed relationship than did virgins, χ²(1, N = 1,924) = 155.265, p = .000. Although only small percentages of either category felt comfortable giving oral sex in a noncommitted relationship, significantly more nonvirgins (15.2%, n = 182) than virgins (6.9%, n = 50) endorsed this category, χ²(1, N = 1,924) = 29.576, p = .000. A similar pattern emerged for the primarily sexually based relationship: 6.5% (n = 47) of virgins endorsed this type of relationship as comfortable for giving oral sex, whereas significantly more nonvirgins endorsed this category (16.4%, n = 196), χ²(1, N = 1,924) = 40.248, p = .000. In responding to “it depends” with respect to giving oral sex in any type of relationship, 19.5% (n = 142) of virgins endorsed this category, and 32.2% (n = 386) of nonvirgins chose this option, χ²(1, N = 1,924) = 36.724, p = .000. In terms of the type of relationship one finds comfortable for receiving oral sex, a similar pattern of significance emerged as with giving oral sex, though a greater percentage virgins and nonvirgins endorsed comfort in almost all categories.

Thus, whereas virgins and nonvirgins tended to endorse similar patterns of relationship comfort with respect to giving and receiving oral sex, more nonvirgins were comfortable with giving and receiving oral sex in less serious relationships and more virgins were comfortable with giving and receiving oral sex in an engaged/married relationship, though the significant difference was very slight for the latter. Both virgins and nonvirgins were most comfortable giving and receiving oral sex in a committed relationship, but nonvirgins were significantly more so than virgins.

Although the majority of men and women in this sample were comfortable giving oral sex in a committed relationship, significantly more women (65.3%, n = 780) were comfortable with giving oral sex in a committed relationship than were men (54.8%, n = 402), χ²(1, N = 1,928) = 21.362, p = .000. Significantly more men (20.3%, n = 149) than women (7.0%, n = 83) were comfortable with giving oral sex in a noncommitted relationship, χ²(1, N = 1,928) = 76.515, p = .000. A similar pattern of percentages emerged for men (32.0%, n = 235) and women (9.4%, n = 112) for the primarily sexually based relationship, χ²(1, N = 1,928) = 157.816, p = .000. Finally, significantly more men (38.0%, n = 279) than women (20.9%, n = 250) indicated comfortableness with giving oral sex on an “it depends” basis, χ²(1, N = 1,928) = 66.550, p = .000. No significant differences existed between men (31.5%, n = 231) and women 29.7% (n = 355) for the engaged/married relationship. Concerning receiving oral sex, a highly similar pattern of significant and nonsignificant patterns emerged between the genders.

Thus, though the men and women felt similarly about engaging in oral sex in an engaged/married relationship, women were more comfortable than men in giving/receiving oral sex in a committed relationship. Men were more comfortable than women in giving/receiving oral sex in a noncommitted relationship or depending on the situation. Overall, therefore, women tended to express greater comfort giving/receiving oral sex in more serious relationships than men.

The most typical reason for giving/receiving oral sex according to the participants’ oral sex experiences. When it came to the reasons for giving oral sex, patterns for virgins were very similar to that of nonvirgins. Pleasure for the receiver was the primary reason with 89.3% (n = 1069) of nonvirgins endorsing this option and 60.2% (n = 438) of virgins endorsing this item, χ²(1, N = 1,924) = 224.981, p = .000. Nonvirgins were also significantly more likely to endorse pleasure for the giver (23.0%, n = 275) in comparison to virgins (15.8%, n = 115), χ²(1, N = 1,924) = 14.330, p = .000. Although only a minority of either group endorsed power as the reason for giving oral sex, significantly more nonvirgins (8.9%, n = 107) than virgins endorsed this option (3.4%, n = 25), χ²(1, N = 1,924) = 21.413, p = .000. It was perhaps most surprising that somewhat similar percentages of virgins (16.4%, n = 119) and nonvirgins (12.4%, n = 148) selected “to avoid sexual intercourse” as the most typical reason for giving oral sex, though this slight difference was significant, χ²(1, N = 1,924) = 6.068, p = .014. Very similar patterns of significance/nonsignificance emerged for the reasons for receiving oral sex, though the disparity for using oral sex to avoid intercourse further widened for receiving oral sex, with even greater numbers of virgins (14.7%, n = 107) and fewer nonvirgins (8.4%, n = 100) endorsing this option.

For women (78.6%, n = 939) and men (77.9%, n = 572), pleasure for the receiver was the most popularly endorsed option for giving oral sex. Despite the fact that men indicated giving oral sex less often than women, significantly more men (26.8%, n = 197) than women (16.2%, n = 194) endorsed “pleasure of the giver” as the most typical reason for giving oral sex, χ²(1, N = 1,928) = 31.540, p = .000. No other significant differences emerged for this item except when it came to giving oral sex to avoid sexual intercourse: significantly more women (18.0%, n = 215) endorsed this choice than men (7.1%, n = 52), χ²(1, N = 1,928) = 45.452, p = .000. For receiving oral sex, significantly more men (84.3%, n = 619) than women (74.5%, n = 890) cited pleasure for the receiver as the most typical reason for receiving oral sex, χ²(1, N = 1,928) = 25.630, p = .000. Likewise, more women (26.8%, n = 320) than men (18.3%, n = 134) cited pleasure
for the giver as the most typical reason they receive oral sex, \( \chi^2(1, N = 1,928) = 18.435, p = .000 \). Significantly more men (8.4\%, \( n = 62 \)) than women (1.9\%, \( n = 23 \)) endorsed power as the most typical reason for receiving oral sex as well, though percentages were small for both groups, \( \chi^2(1, N = 1,928) = 45.860, p = .000 \). Finally, as with giving oral sex, significantly more women (12.6\%, \( n = 151 \)) than men (7.6\%, \( n = 56 \)) indicated receiving oral sex as a way to avoid sexual intercourse, \( \chi^2(1, N = 1,928) = 11.939, p = .001 \).

Assessment of knowledge about transmission of STIs via oral sex. Virgins did not significantly differ from nonvirgins in terms of knowledge about oral transmission of STIs, but they sometimes demonstrated slightly more naiveté about protecting themselves during oral sex. In comparison to 29.2\% (\( n = 350 \)) of nonvirgins who correctly answered this item, 23.8\% (\( n = 173 \)) of virgins correctly identified Saran\textsuperscript{TM} wrap as a means of protection during oral sex, \( \chi^2(1, N = 1,924) = 6.771, p = .009 \). A slightly greater number of virgins (13.1\%, \( n = 95 \)) than nonvirgins (9.4\%, \( n = 113 \)) also incorrectly endorsed spermicide as being able to protect them from STIs, \( \chi^2(1, N = 1,924) = 6.171, p = .013 \). Nearly 35.0\% of nonvirgins (\( n = 413 \)) compared with 28.9\% (\( n = 210 \)) of virgins correctly identified dental dams as a proper means of protection against STIs, \( \chi^2(1, N = 1,924) = 6.518, p = .011 \). Finally, 5.0\% of virgins (\( n = 36 \)) in comparison to 2.3\% (\( n = 28 \)) of nonvirgins incorrectly identified the birth control pill as something that could protect them from STIs during oral sex, \( \chi^2(1, N = 1,924) = 9.601, p = .002 \). All other comparisons were not significant, though it should be noted that even the aforementioned differences were very slight though significant. Overall, virgins and non-virgins tend to demonstrate similar knowledge about STI transmission during oral sex and the tools one can use for protection; virgins were only slightly more likely than were nonvirgins to be unsure about the proper types of protection. It is important to note, however, that whether a majority chose the correct answer differed significantly based on the item.

For sexual knowledge, both genders were more likely to endorse the right answer than the wrong one, though the greatest difference emerged in favor of women: significantly more women (72.8\%, \( n = 853 \)) than men (64.4\%, \( n = 466 \)) were likely to endorse the correct answer, yes, for whether one could get gonorrhea from oral sex, \( \chi^2(2, N = 1,895) = 15.515, p = .000 \). Although significantly more women (79.0\%, \( n = 925 \)) than men (74.6\%, \( n = 541 \)) correctly answered positively that one could get genital warts from oral sex, \( \chi^2(1, N = 1,896) = 6.642, p = .036 \), the difference is small enough to question the practical significance (Chow, 1998). That is, although statistically significant because of the large sample size, the use of such findings to influence policy might be questionable. Men and women did not significantly differ in their knowledge of Chlamydia. For knowledge on protection during oral sex, significant differences emerged between the genders. Although the genders did not differ in how often they protected themselves during oral sex (over 80.0\% of both genders did not engage in protection), significantly more men (34.6\%, \( n = 254 \)) than women (22.9\%, \( n = 273 \)) correctly chose Saran\textsuperscript{TM} wrap as a means to protect themselves during oral sex, \( \chi^2(1, N = 1,928) = 31.546, p = .000 \). No significant differences emerged for endorsing male condoms—90.0\% of both genders correctly endorsed this. Dental dams, which a correct answer because this can be used on women when they are receiving oral sex, slightly over 30.0\% of each sex endorsed this option. No differences of practical significance emerged for the patch (5.0% or less endorsed this incorrect option), but significantly more women (43.6\%, \( n = 521 \)) than men (36.1\%, \( n = 265 \)) thought that female condoms could protect them during oral sex, \( \chi^2(1, N = 1,928) = 10.677, p = .001 \). Overall, men presented themselves as slightly more knowledgeable than women about oral sex protection, though no one gender presented as very knowledgeable about oral sex protection. Far less than half of the men or the women understood that dental dams or Saran\textsuperscript{TM} wrap could be used as protection during oral sex.

Discussion

Summary of Findings

That students have different perceptions of sexual terms and acts was evident from the beginning of this survey: A minority of participants considered themselves virgins even though they had had intercourse, whereas an even smaller number did not consider themselves virgins even though they had not had intercourse. Differences in perceptions and behaviors emerged between virgins and nonvirgins and between women and men, though the justification is left largely unknown because of the limitations of this survey. Differences between any of these groups cannot be solely attributed to differences in sexual history, however, as the majority of men and women had only one or no partners in the past year or lifetime.

Regarding participation in oral sex activities, participants were more likely to engage in oral sex than in intercourse, though virgins were statistically much less likely to engage in oral sex than were nonvirgins. The sizeable minority of virgins that did engage in oral sex (~30%) shared many similar views with nonvirgins. Although the majority of all participants perceived intercourse as intimate, significantly more virgins than nonvirgins perceived intercourse as not intimate. Men and women did not significantly differ in their perceptions of intercourse. Only slightly more than half of all virgins/nonvirgins, men and women, perceived oral sex as intimate. Of those who did not perceive oral sex as intimate, men were significantly more likely than women to be neutral toward oral sex, whereas women were significantly more likely than men to perceive oral sex as not intimate. Virgins and nonvirgins did not significantly differ in their perceptions of oral sex.

Most participants felt comfortable engaging in oral sex in a committed relationship, though significantly fewer endorsed marriage as a comfortable context for oral sex (see Interpretation of Findings for a discussion of this coun-
In terms of sexual knowledge, most of the participants correctly knew that all of the listed STIs could be transmitted via oral sex, but a significant minority (over 20%) was unaware of the health risks of oral sex. Virgins did not significantly differ from nonvirgins in terms of knowledge about oral transmission of STIs, but they sometimes demonstrated slightly more naiveté about protecting themselves during oral sex; though the statistically significant difference was slight. Both genders were more likely to demonstrate correct than incorrect knowledge about STI transmission via oral sex, and only one item, pertaining to gonorrhea, indicated that significantly more women than men endorsed the correct option. Other differences emerged, but they were too small to be of practical significance.

Considerable confusion was exhibited for protection during oral sex—only male condom was selected by the majority of participants, whereas Saran™ wrap and dental dam were also correct answers. Significantly more men than women correctly selected the proper means of protection during oral sex, though save for the male condom, less than 35% selected the other correct answers, that is, dental dam and Saran™ wrap. Clearly there is much greater awareness of the need for protection while giving oral sex to men than to women, though it is interesting to note that men were more likely than women to be slightly more informed of all types of protection.

Interpretation of Findings

This study confirmed some previous findings, added new findings, and potentially clarified some previously mixed trends in the literature, though questions remain. This study confirmed previous findings of virgins engaging in oral sex and at a percentage similar to that in previous research (up to 30%). What the current study has helped to clarify, however, is that women indeed indicated they were giving more oral sex than men, and men indicated that they received more oral sex than did women. This suggests that at least the perception that women give oral sex more often than men is not merely anecdotal, as it was endorsed by both genders in this study.

That women endorsed giving oral sex more often than men might be due to the fact that they were also more likely to perceive oral sex as less intimate than men. Yet, conversely, they still showed a preference for engaging in it in serious relationships. Thus, because pleasure for the receiver was the most frequently endorsed reason for engaging in oral sex for both genders, these findings might imply that college women are more likely than college men to use oral sex to please their male partners. College men might be more likely than women to use other means, sexual or otherwise, of pleasing their female partners. The fact that college men were more likely than college women to endorse pleasure as the reason for both giving and receiving oral sex, yet they were not demonstrated as actually giving more, might indicate that college women are less receptive to receiving oral sex than are college men. This is supported by the finding that significantly fewer women than men endorsed “pleasure...
for the receiver” as the most typical reason for receiving oral sex. Overall, then, college women appear to be less receptive to oral sex, perceive it as less intimate than college men, and are also potentially aware of how much men like it. Thus, they might be more likely to give oral sex to men as a means to make men happy in close relationships. College men, in turn, might be happier to receive oral sex more often in all types of relationships and yet give oral sex to women less often by comparison because the women enjoy it less than they do.

Yet, there remains another conundrum: Although highly similar percentages of women indicated that they gave more, received more, or gave/received oral sex equally, 13.6% of men indicated giving more, whereas 22.7% of women indicated receiving more. Furthermore, 41.1% of men indicated receiving more, whereas only 23.7% of women indicated giving more. Why are the percentages not parallel? One reason could be that the women are responding within the context of individual relationships, whereas men may be responding in terms of number of oral sex partners—overall, men reported significantly more oral sex partners in their lifetime than women.

It was likely predictable that both women and virgins would feel more comfortable than men and nonvirgins in engaging in oral sex in serious relationships. This pattern somewhat matches traditional gender roles in sexual behavior, with men more likely to report more casual sexual encounters than women (Oliver & Hyde, 1993). In contrast, it was new information that virgins who engaged in oral sex were not overwhelmingly different from nonvirgins on most behaviors and perceptions. That is, engaging in oral sex might have leveled many possible differences between the two. For example, only a minority of virgins were likely to use oral sex as a means to avoid pregnancy—they too, like nonvirgins, tend to engage in oral sex for the pleasure of the receiver.

The most mysterious findings, though, were the diversity of opinions on the type of relationship in which the participants felt comfortable having oral sex as well as the greater reluctance to engage in oral sex in an engaged/married relationship as compared with in a committed relationship. This finding could be due to a misinterpretation of the wording—some participants might have been responding to this question on the basis of actual as opposed to hypothetical experience: The question is worded “do you feel…” as opposed to “would feel…”. If so, then their responses could indicate potentially different perceptions of committed relationships—that is, women might have interpreted their relationships as more committed than the men did. If, however, the respondents did accurately interpret the question to pertain to hypothetical situations, oral sex might be regarded as an act that heterosexual college students would not necessarily share in the most intimate or important of relationships of the options offered in this study, the engaged/married relationship. Could oral sex somehow be perceived as less appropriate than other sex acts in the context of marriage? Less controversially, could oral sex be perceived as unnecessary in a context in which intercourse is socially acceptable? A significant minority (18–40%, depending on virgin status and sex) also indicated “it depends” when it came to their comfort in engaging in oral sex. Thus, all groups (virgins, nonvirgins, men, and women) were most likely to endorse the committed relationship as far as oral sex comfort. Therefore, the type of relationship in which these college students found oral sex to be comfortable was rather individual.

Other new findings that emerged from this study pertained to knowledge and protection of STIs during oral sex. Women were less knowledgeable than men when it came to protecting themselves during oral sex, though the majority of all participants seemed aware of many of the risks. It should be of great concern that participants were college students, yet up to 20% were confused about the health risks of oral sex and sometimes up to 70% of some groups were not aware of all the ways to protect themselves during oral sex. Parents and school officials alike should be aware of this confusion among students. Lacking knowledge of protection during oral sex might indicate deficiencies in the educational system (due to not only scarcity of information but also a focus on only life-threatening STIs), a reluctance of parents to talk about protection, or the possibility that this sample had been primarily exposed to abstinence-only sex education, which would not focus on protection. Although the male condom was the most familiar form of protection to all of the participants, perhaps because men are the more likely recipients of oral sex, the majority of men as well as women were engaging in oral sex. Thus, this information indicates that women are at a greater risk of receiving an STI from a man when he is giving her oral sex, should he have any sores or lesions in his mouth. Oral herpes is extremely common and can be transmitted to the genitals, for instance. In turn, men can also be at risk for receiving an STI when giving oral sex to women, with the STI manifesting itself in their throats (i.e., pharyngeal infection).

If the results of this study could at least generalize to other college populations, it does allow for the conclusion that oral sex among college students contradicts several common assumptions: Being a virgin does not necessarily mean abstinence from oral sex, and oral sex is more likely to occur before marriage for those who have already engaged in sexual intercourse (and a majority of this sample had) and not necessarily in the context of a serious relationship (but the reasons as to why are speculative). Furthermore, female college students are more likely to perceive themselves as giving more oral sex than receiving, and men are more likely to perceive themselves as receiving more oral sex than giving. And though college students know the risks of oral sex, they do not necessarily know all the means to protect themselves during oral sex.

**Strengths and Limitations of Study**

The anonymity of data collection was a strength of this survey in addition to the more thorough investigation of a fairly unexcavated topic. A previous study indicated that adolescents reported significantly more sexual activity when in-
teracting with a computer in comparison to adolescents in face-to-face interviews (Romer et al., 1997). This finding could imply greater comfort in a more anonymous setting as sexual activity is hardly condoned for youth between the ages of 9 and 15, for girls in particular.

The large sample size of the current study also closely represents the University of Georgia, though it is questionable in generalizing to a non-Southern, older, less-educated, or nonheterosexual population. In interpreting the findings, they are limited by this sample also in terms of sexual experience—most did not have more than two partners in their lifetime. Though self-report has been demonstrated as both valid and reliable (Turner, Miller, & Rogers, 1997), the reliability varies across situations. For instance, test–rest reliability has declined when asking participants to recall their frequency of intercourse for more than a few months (Catania, Binson, Van Der Straten, & Stone, 1995). This study avoided that particular pitfall, however, by inquiring about partners and not frequency of intercourse or oral sex. Nonetheless, it is also possible that participants might under- or overreport their sexual activities, and validity items were not included to check for this.

Furthermore, the wording of sexual intercourse (“penetration by a sexual organ”) might have generated some confusion among the participants, as this definition technically could incorporate heterosexual or homosexual anal sex or penetration of the mouth by a penis and exclude vaginal–penile intercourse for heterosexual or bisexual male respondents. Alternatively, “penetration by” could refer to a woman receiving penetration, a man penetrating (penetration by man to a partner), or a man receiving penetration. It was the intention of the author to define intercourse broadly to include gay/bi/lesbian participants—limiting the definition to penile–vaginal penetration would have been more clear, but also limiting. Fortunately, however, the data indicate that at least many, if not all, heterosexual male participants seem to have understood the definition to mean “penetration of or by a sexual organ” or “penetration received by a woman or given by a man to a woman.” As previously stated, less than 1% identified as gay, lesbian, or bisexual, and 65.1% (n = 477) of men and 60.5% of women (n = 720) indicated that they had had intercourse. In future surveys, it would be more appropriate to ask separate questions about types of intercourse in order to capture virgins and nonvirgins in both the heterosexual and homosexual populations. In addition, the definition of intercourse as penetration by a sexual organ would also indicate that someone having had oral sex would also be considered a virgin; it was the intention of this study to capture just such ambiguity of self-definition.

It is also unclear whether offering extra credit as an incentive might have compromised the integrity of the survey—however, those participants who were retained did not show a random choice of answers. Future research might involve online, anonymous chat/focus groups that capture more richness of such data, revealing explanations behind the answers on this survey.

Another weakness of this study lies in the design of the survey—allowing participants to “check all that applies” for individual items prevented more detailed analyses and less clear results. In the future, researchers should ask isolated questions for each option when using a similarly survey.

The varied responses to oral sex in this survey of nearly 2,000 University of Georgia students demonstrates not only that young women and men, virgins and nonvirgins, approach oral sex somewhat differently but also that oral sex itself appears to be a highly individual affair—not entirely intimate, yet still intimate enough for seriously committed relationships. This survey cannot answer whether oral sex is perceived as less “appropriate” for marriage or whether some student participants were responding on the basis of actual experience only—given their youth, fewer would have been engaged than in committed relationships. It is also possible that these answers represent the fact that students do not devote considerable thought to oral sex, at least in comparison to intercourse, and a few individual participants did offer such thoughts to the author of this study. Therefore, they themselves might be unclear about their feelings regarding oral sex.

Yet, oral sex is a sexual health issue that deserves considerable attention, not only in sex education courses as a potential health risk but also as an act that might involve serious emotions. It is also an act that is no longer only a prelude to sexual intercourse but that is something that can be engaged in for the act itself by nonvirgins and virgins alike. Clearly, the women in this study felt ambivalent to have been more likely to regard oral sex as “not intimate” than men, yet they felt more comfortable engaging in it in a committed relationship than did men. The fact that significant numbers of men and women were neutral or, especially women, perceived oral sex to not be intimate, should be justification for further investigation. Do women give oral sex more often (or perceive that they do) because they are more likely than men to perceive it as a nonintimate act? And why is it perceived by some women as such? This survey could not provide those answers, but it does indicate significant gender differences in oral sex behavior.

As with all sexual issues, women and men should contemplate the advantages and disadvantages of any sexual act and prepare accordingly, whether that involves using physical protection or actively deciding not to pursue oral sex because of emotional vulnerability. Future research needs to investigate how planned oral sex is as an act—the significant minority that endorsed “it depends” when selecting the type of relationship in which they felt comfortable engaging in oral sex suggests it might not always be planned. The physical or emotional implications surrounding oral sex also need to be addressed in some context (in school or by parents) to best prepare young women and men to make the most informed decisions about their sexual lives.

Future research should investigate the utility of actively incorporating oral sex into sex education classes that involves deliberate targeting of virgins and nonvirgins alike. How oral sex is approached might depend on the context (i.e.,...
whether the targeted population is at great risk for teenage pregnancy)—it could be deliberately introduced as an alternative to intercourse to lessen the likelihood of pregnancy (see Townsend, 2004). In addition, “petting,” or “outercourse,” which involve nonsensitive sex, and mutual masturbation could also be viable alternatives to intercourse and represent other opportunities for future research into types of sex education content. Parental fears regarding such suggestions could be allayed by stressing the strong emotions associated with sexually intimate acts, the permanent repercussions of some sexually transmitted infections, and perhaps even allowing the students an opportunity to give written responses to how they might negotiate certain sexual situations. Nonetheless, the incidence of virgins engaging in oral sex as well as the confusion about health risks and protection in this study should indicate a need for sex education to start in high school, and it should be of a more comprehensive nature than is endorsed by the current administration. Clearly, oral sex is an act of great interest to college students, and because most of this population already had an oral sex partner in their history, the thoughts or behavior pertaining to oral sex are obviously initiating before college or early on in their college experience.

References


Appendix

Online Survey of Oral–Sexual Behavior

Demographics:

1. Sex
   • Female
   • Male
ORAL SEX

2. Race
   - African American
   - Hispanic American
   - Asian American
   - European American
   - Other? [text box]

3. Sexual orientation
   - Lesbian
   - Gay
   - Bisexual
   - Heterosexual
   - Unsure

4. Age: Please fill in a NUMBER ONLY: [text box]

Behavior/Attitudes:

5. Have you ever had sexual intercourse before (penetration by a sexual organ)?
   Yes  No

6. Do you consider yourself to be a virgin?
   Yes  No

7. How many partners have you had sexual intercourse (penetration by a sexual organ) with in the past year?
   Please fill in a NUMBER ONLY: [text box]

8. How many partners have you had sexual intercourse (penetration by a sexual organ) with in your lifetime?
   Please fill in a NUMBER ONLY: [text box]

9. Rate the intimacy of oral sex
   1   2   3   4   5
   Not at all intimate  Extremely intimate

10. Rate the intimacy of intercourse (penetration by a sexual organ)
    1   2   3   4   5
    Not at all intimate  Extremely intimate

11. How often do you protect yourself while giving or receiving oral sex?
    - I do not engage in oral sex
    - Always
    - Almost always
    - Sometimes
    - Never
    - Do not understand question

12. If you use protection, what type are you using? If you do not use any protection, please write “do not use any” in the box. [text box]

13. In what type of relationship do you feel comfortable GIVING oral sex? [check all that apply]
    - I do not engage in oral sex (giving or receiving)
    - Engaged/Married
    - Committed relationship
    - Noncommitted relationship
    - Primarily sexually based relationship
    - Depends on situation

14. In what type of relationship do you feel comfortable RECEIVING oral sex? [check all that apply]
    - I do not engage in oral sex (giving or receiving)
    - Engaged/Married
    - Committed relationship
    - Noncommitted relationship
    - Primarily sexually based relationship
    - Depends on situation

15. Do you tend to … [choose which applies]
    - GIVE oral sex more than you RECEIVE oral sex?
    - RECEIVE oral sex more than you GIVE oral sex?
    - GIVE AND RECEIVE oral sex equally often?
    - I never engage in giving or receiving oral sex

16. When did you last GIVE oral sex?
    - Less than 1 month ago
    - Less than 3 months ago
    - Less than 6 months ago
    - Less than 1 year ago
    - More than 1 year ago
    - Never engaged in oral sex

17. How many partners did you GIVE oral sex to in the past year?
    Please fill in a NUMBER ONLY: [text box]

18. How many partners have you GIVEN oral sex to in your lifetime?
    Please fill in a NUMBER ONLY: [text box]

19. FOR YOU, what is the most typical reason for GIVING oral sex? [Check all that apply]
    - Pleasure for YOU, the giver
    - Pleasure for THE RECEIVER
    - Power
    - To avoid sexual intercourse
    - To avoid other sexual activities, but not intercourse
    - Other: [text box]
20. FOR YOU, what is the most typical reason for RECEIVING oral sex? [Check all that apply]
   • Pleasure for YOU, the receiver
   • Pleasure for THE GIVER
   • Power
   • To avoid sexual intercourse
   • To avoid other sexual activities, but not intercourse
   • Other: [text box]

21. When did you last RECEIVE oral sex?
   • Less than 1 month ago
   • Less than 3 months ago
   • Less than 6 months ago
   • Less than 1 year ago
   • More than 1 year ago
   • Never engaged in oral sex

22. How many partners did you RECEIVE oral sex from in the past year?
   Please fill in a NUMBER ONLY: [text box]

23. How many partners have you RECEIVED oral sex from in your lifetime?
   Please fill in a NUMBER ONLY: [text box]

KNOWLEDGE:

24. Can you get AIDS via oral sex?
   Yes
   No
   Not impossible, but rare

25. Can you get HERPES from oral sex
   Yes

26. Can you get HEPITITIS B from oral sex?
   Yes
   No
   Not impossible, but rare

27. Can you get GONORRHEA from oral sex?
   Yes
   No
   Not impossible, but rare

28. Can you get CHLAMYDIA from oral sex?
   Yes
   No
   Not impossible, but rare

29. Can you get HPV (genital warts) from oral sex?
   Yes
   No
   Not impossible, but rare

30. Which of the following could protect you from receiving an STI (sexually transmitted infection) from engaging in oral sex? [check all that apply]
   • Male condom
   • Saran wrap
   • Spermicide
   • Patch
   • Dental dam
   • Female condom
   • Birth control pill
   • IUD